



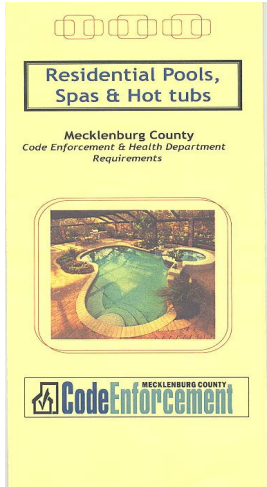
Building Consistency Meeting

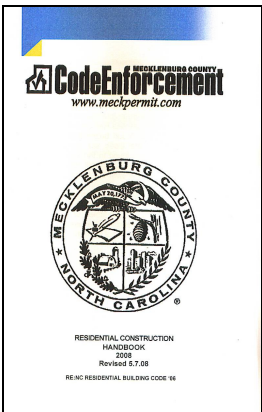
Residential

Date: 5/7/2008 Recorder and minutes prepared by: Danny Wooten/Jeff Griffin

Staff present: Danny Wooten, George Rogers, Steve Kellen, David Williams, Michael Johnson, Paul Cupp, Andrew DeMaury, Randy Newman, Howard Gridstaff, Mark Wyte, Jeff Griffin.

Public present: Chris Newton/Hans Kasak/Harold Ingram (**Ryland Homes**), Daniel McBride (**Cunnane Group**), Michael Skinner (**M/I Homes**), Kent Bublitz (**Royce Builders**); Justin Frantz/Jeff Dotson/Justin Kies (**Eastwood Homes**); Lou Salvador/Roger Guchone (**DR Horton**); Chad Hughes (**Barefoot and Co**); Jim Brodnik (**Mattamy Homes**); Ken Smith (**Banister Homes**); Jason Whitener (**Dienst Custom Homes**); Brad Crysler/Paul Boucher (**John Wieland**); Wayne Carter (**Evergreen Homebuilders**); Terry Cleary (**Meeting Street Homes**); Bob McKee (**Ryan Homes**); Greg Culver (**Backlot Drafting & Design**); Tommy Crowell/Michelle Lakeson (**Saussy Burbank**); Chris Tucker (**Southern Staircase**); Jeff Calvert (**CP Morgan**); Brian Tunall/Craig Jones (**Vicus Builders**); David Schwieman (**DR Schwieman, Inc**); Adam Danneman (**McCar Homes**).

Topics/Subject	Decisions/Conclusions/Actions
Old Business	
None	
New Business	
Pool/hot tubs/ spa handout	<p>Work was completed on brochure dealing with Pools and spas. This brochure was produced in cooperation with Mecklenburg County Health Department and is available on line and at the Residential Counter.</p> 
Appendix M handout	<p>Complete revision of Appendix M has been submitted to the Building Code Council and final write up was passed out to the group for review. Attached is a copy of that submission.</p>

Residential handbook	<p>Small residential handbook will be available at next consistency meeting for full distribution.</p> 
Ledger strip installation and nailing	<p>Issue brought up again about ledger strip application. Under section R502.6.2 the allowance for ledger strips used for support and the nailing as listed in Table R602.3(1) is for single joists spans only. When a double or triple joists(girder) is to be installed a hanger of appropriate size must be installed to carry the load. A double joist placed under a non-bearing partition wall to prevent bounce is not a required double location and a ledger strip can be used. Only area where doubles or beams of adequate size are required are under Bearing partitions per Section R502.4.</p>
Electronic plan submittal	<p>The Department is scheduled to be on line with electronic plan submittal in June. Information on training sessions and submittal requirements will be discussed at next consistency meeting.</p>
2009 Code changes	<p>Currently the Department is working up a list of the changes from the 2006 Code to the 2009 Code and will have information out shortly. The effective dates of the Codes will be January 1st 2009 with a mandatory enforcement date of June 1st 2009. Code books will not be available until round the last quarter of this year.</p>
Tempered glazing failure at framing inspection	<p>Concern brought up about inspectors turning down tempered glazing as a frame inspection. This issue was discussed with staff and currently no inspector is turning a building down just for that item. If there are other items to list at frame inspection the tempered glass should be listed also. If there is only an issue with tempered glass, inspectors are listing that glass on the sticker and in the inspection notes on the computer but are passing the frame inspection. Noting helps document that the builder was advised prior to a final inspection that he was going to have an issue with glass at a specific location.</p>
Retaining wall guard requirements	<p>Question asked about guards at retaining walls and what's required. Currently there is no language in the Code that addresses a requirement for a guard at retaining walls that have more than a 30" drop. Code language was being developed that dealt with a retaining wall within 10' of the building footprint being required to have a guard protection. The Department is currently checking on the status of that change to see if the new guard requirement will be in the 2009 Code.</p>

Appendix M

Wood Decks

(Entire section is a NC amended appendix)

Section AM101

General

AM101.1 General. A deck is an exposed exterior wood floor structure which may be attached to the structure or freestanding. Roofed porches (open or screened-in) may be constructed using these provisions.

AM101.2 Deck design. Computer deck design programs may be accepted by the Code Enforcement Official.

Section AM102

Footers

AM102.1 Footers. Support post shall be supported by a minimum footing per Figure AM102 and Table AM102.1 Minimum footing depth shall be 12" below finished grade per R403.1.4. Tributary area is calculated per Figure AM102.1.

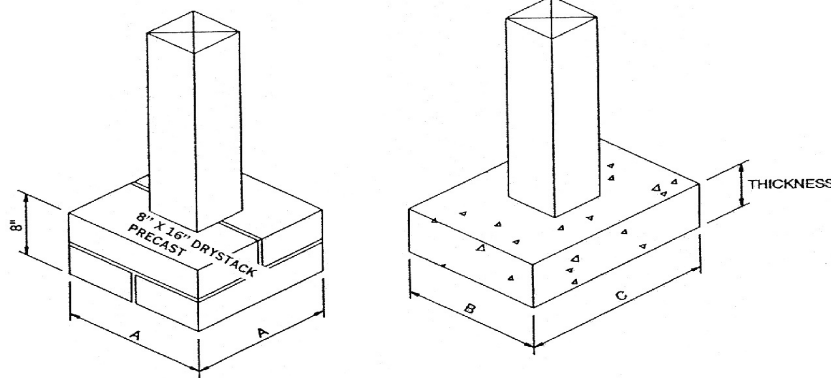


Figure AM102

Table AM102.1

Footing table ^{a, b, c}

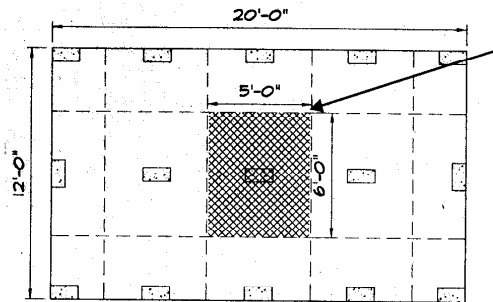
Size (inches)		Tributary Area	Thickness (inches)	
A x A	B x C	(Sq. Ft.)	Precast	Cast-in-place
8 x 16	8 x 16	36	4"	6"
12 x 12	12 x 12	40	4"	6"
16 x 16	16 x 16	70	8"	8"
----	16 x 24	100	--	8"
	24 x 24	150	--	8"

- a. Footing values are based on single floor and roof loads
- b. Support post must rest in center 1/3 of footer
- c. Top of footer shall be level for full bearing support of post

Section AM103

Flashing

AM103.1 Flashing. When attached to a structure, the structure to which attached shall have a treated wood band for the length of the deck, or corrosion-resistant flashing shall be used to prevent moisture from coming in contact with the untreated framing of the structure. Aluminum flashing shall not be used in conjunction with deck construction. The deck band and the structure band shall be constructed in contact with each other except on brick veneer structures and where plywood sheathing is required and properly flashed (when plywood is required, use pressure preservative treated plywood). Siding shall not be installed between the structure and the deck band. If attached to a brick structure, neither flashing nor a treated band for the brick structure is required. In addition, the treated deck band shall be constructed in contact with the brick veneer. Flashing shall be installed per Figure AM103.



Tributary area of shaded section on free standing deck shown is 5'x6'=30 sq. ft. Code will require a minimum footer of 8" x 16" per Table AM102.1

Figure AM102.1

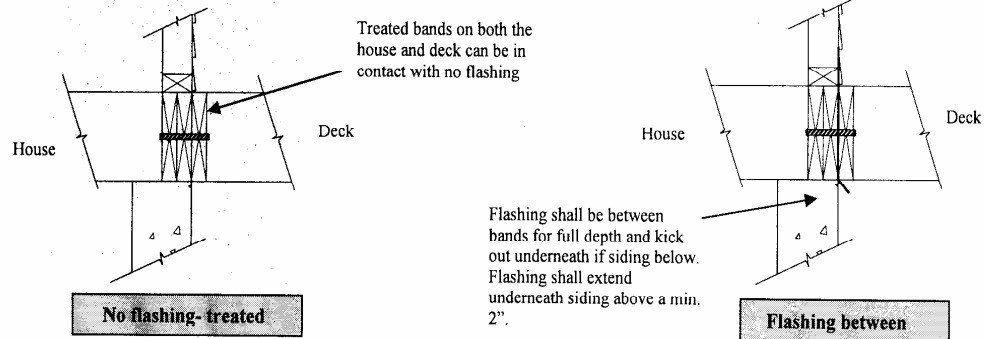


Figure AM103

Section AM104 Deck attachment

AM104.1 Deck Attachment. When a deck is supported at the structure by attaching the deck to the structure, the following attachment schedules shall apply for attaching the deck band to the structure.

AM104.1.1 All Structures Except Brick veneer Structures:

Fasteners	8' Max Joist Span ^a	16' Max Joist Span ^a
5/8" Hot Dipped Galv. Bolts with nut and washer ^b	1 @ 3'-6" o.c.	1 @ 1'-8" o.c.
and	and	and
12d Common Hot Dipped Galv. Nails ^c	2 @ 8" o.c.	3 @ 6" o.c.

a. Attachment interpolation between 8' & 16' joists span are allowed

b. Minimum edge distance for bolts is 2 1/2 inches

c. Nails must penetrate the supporting structure band a minimum of 1 1/2 inches

AM104.1.2 Brick Veneer Structures

Fasteners	8' Max Joist Span ^a	16' Max joist Span ^a
5/8" Hot Dipped Galv. Bolts with Nut and Washer ^b	1 @ 2'-4" o.c.	1 @ 1'-4" o.c.

a. Attachment interpolation between 8' & 16' is allowed

b. Minimum edge distance for bolts is 2 1/2 inches

AM104.1.3 Masonry Ledge Support

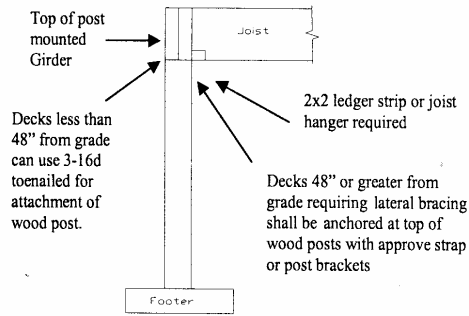
If the deck band is supported by a minimum of 1/2 inch masonry ledge along the foundation wall, 5/8 inch hot dipped galvanized bolts with washers spaced at 48 inches o.c. may be used for support.

AM104.1.4 Other means of support

Joist hangers or other means of attachment may be connected to house band and shall be properly flashed

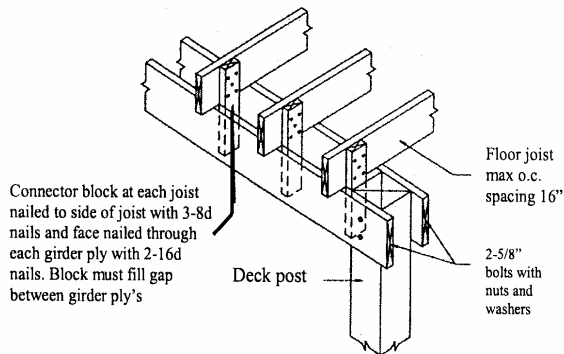
Section AM105

AM105.1 Girder Support & Span. Girders shall bear directly on support post with post attached at top to prevent lateral displacement or be connected to the side of posts with two 5/8 inch hot dipped galvanized bolts with nut and washer. Girder spans are per Table R502.5 (1&2). Girder support may be installed per Figure AM105 for top mount; Figure AM105.1 for side mount and Figure AM105.2 for split girder detail. Girders may also be cantilevered off ends of support post no more than 1 joist spacing or 16" whichever is greater per Figure AM105.3.



Top mount/flush

Figure AM105



Split girder limited to floor loads only and cantilever girder ends allowed per AM105.3

Split girder detail

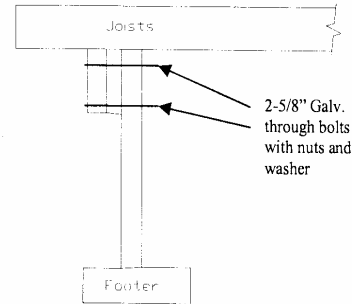
Figure AM105.2

Section AM106

M106.1 Joist Spans & Cantilevers. Joists spans shall be based upon Table R502.3.1(2) with 40 lbs per sq. ft. live load and 10 lbs per sq. ft. dead load. Floor joists for exterior decks may be cantilevered per Table R502.3.3 (1).

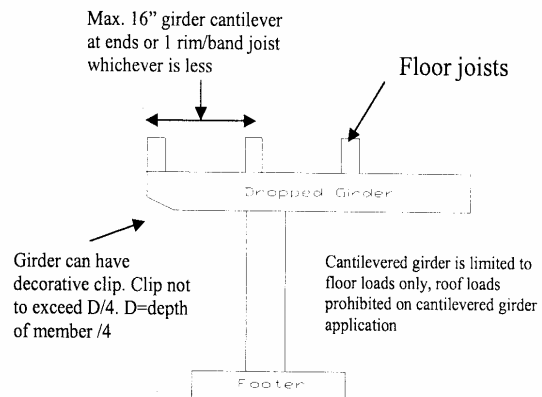
Spacing	2x6	2x8	2x10	2x12
12"	10-9	14-2	18-0	21-9
16"	9-9	12-10	16-1	18-10
19.2"	9-2	12-1	14-8	17-2
24"	8-6	11-0	13-1	15-5

Partial reprint of Table R502.3.1(2), #2 SYP only joist spans



Side mount dropped girder

Figure AM105.1



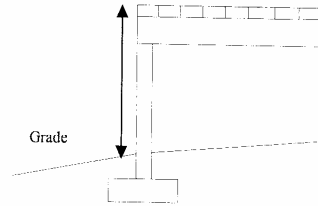
Cantilevered dropped girder detail

Figure AM105.3

Section AM107

AM107.1 Floor Decking. Floor decking shall be No. 2 grade treated Southern Pine or equivalent. The minimum floor decking thickness shall be as follows:

Joist Spacing	Decking (nominal)
12" o.c.	1" S4S
16" o.c.	1" T&G
19.2 o.c.	1-1/4" S4S
24"-36" o.c.	2" S4S



Less than 4' (decking to grade) and attached to structure no bracing required

Figure AM109

Section AM108

AM108.1 Post height. Maximum height of Deck support posts as follows:

Post size ^a	Max. Post Height ^{b,c}
4x4	8'-0"
6x6	20'-0"

a. This table is based on No. 2 Southern Pine posts.
b. From top of footing to bottom of girder.
c. Decks with post heights exceeding these requirements shall be designed by a registered design professional.

Freestanding decks requiring bracing shall be installed in both directions off each post

Decks attached to structure require diagonal bracing only at outside girder line parallel with structure

Section AM109

AM109.1 Deck bracing. Decks shall be braced to provide lateral stability. The following are acceptable means to provide lateral stability.

AM109.1.1. When the deck floor height is less than 4'-0" above finished grade per Figure AM109 and the deck is attached to the structure in accordance with Section AM104, lateral bracing is not required.

AM109.1.2. 4x4 wood knee braces may be provided on each column in both directions. The knee braces shall attach to each post at a point not less than 1/3 of the post length from the top of the post, and the braces shall be angled between 45 degrees and 60 degrees from the horizontal. Knee braces shall be bolted to the post and the girder with one 5/8 inch hot dipped galvanized bolt with nut and washer at both ends of the brace per Figure AM109.1

AM109.1.3. For freestanding decks without knee braces or diagonal bracing, lateral stability may be provided by embedding the post in accordance with Figure AM109.2 and the following:

Post size	Max. Tributary Area	Max. Post Height	Embedment Depth	Concrete Diameter
4x4	48 SF	4'-0"	2'-6"	1'-0"
6x6	120 SF	6'-0"	3'-6"	1'-8"

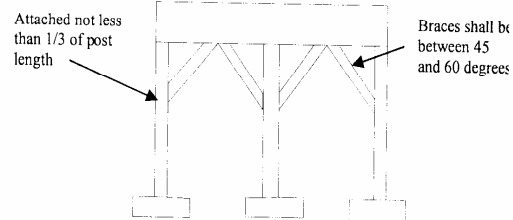


Figure AM109.1

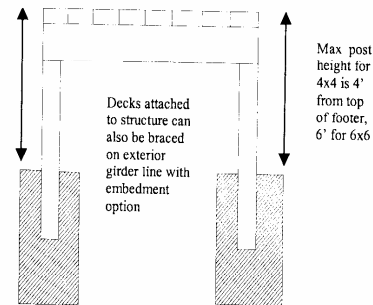


Figure AM109.2

AM109.1.4 2x6 diagonal vertical cross bracing may be provided in two perpendicular directions for freestanding decks or parallel to the structure at the exterior column line for attached decks. The 2x6's shall be attached to the posts with one 5/8 inch hot dipped galvanized bolt with nut and washer at each end of each bracing member per Figure AM109.3.

If span between post is greater than 7' center blocking and 1-5/8" bolt with nut and washer required

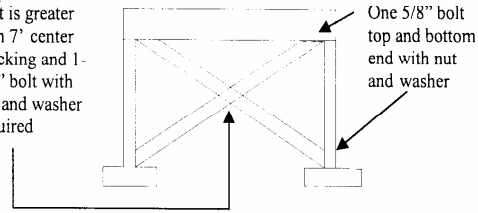


Figure AM109.3

AM109.1.5 For embedment of piles in Coastal Regions, see Chapter 45.

Section AM110

AM110.1 Stairs shall be constructed per Figure AM110. Stringer spans shall be no greater than 7' span between supports. Spacing between stringers shall be based upon decking material used per AM107.1. Each Stringer shall have minimum 3 1/2" between step cut and back of stringer. All stringers supported at top on suspended headers shall be attached with 3/8" Galv bolts with nuts and washers.

Max. spacing between stringers 36".

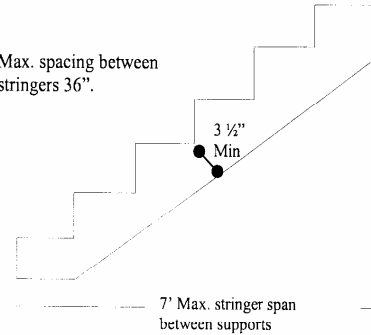


Figure AM110

Section AM111

AM111.1 Handrails, Guards and General.

Deck handrails, guards and general construction shall be per Figure AM111.

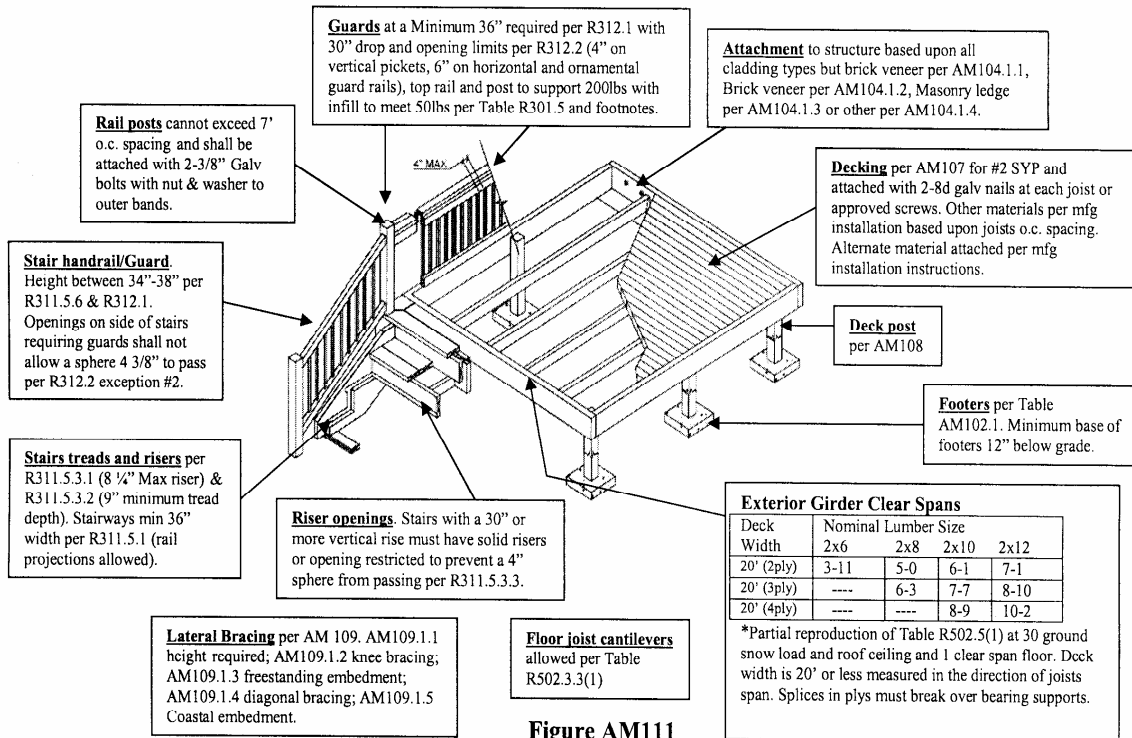


Figure AM111